WHAT IS CLAIMED IS:

1. A display device for performing display including an emissive element in each of pixels arranged in a matrix, comprising:

a voltage-to-current conversion circuit for converting an externally supplied voltage video signal indicating a display luminance for each pixel into a current video signal;

a data line connected to the voltage-to-current conversion circuit for sequentially receiving therefrom the current video signal for pixels along a vertical direction; and

a pixel circuit connected to the data line, in which a voltage in accordance with the current video signal supplied in the data line is retained in an auxiliary capacitor, and a current corresponding to the voltage retained in the auxiliary capacitor is made to flow in a drive element, so as to cause light emission in a corresponding emissive element.

2. A device as defined in Claim 1, wherein

the voltage-to-current conversion circuit includes at least two pairs of retaining circuit and output circuit, each pair comprising:

a retaining circuit for retaining a voltage in accordance with the voltage video signal for one horizontal line; and

an output circuit for supplying to a corresponding data line a current in accordance with the voltage for one horizontal line retained in the paired retaining circuit; wherein

when the voltage video signal is being written into a retaining circuit of one of the pairs, a current is output from an output circuit of the other of the pairs, and this process is repeated

by sequentially alternating between the pairs so as to perform line sequential display.

3. A device as defined in Claim 1, wherein the voltage-to-current conversion circuit comprises:

an output transistor which receives the voltage video signal at its control terminal and outputs to the data line a current in accordance with the voltage video signal.

4. A device as defined in Claim 3, wherein the voltage-to-current conversion circuit further comprises:

a capacitor for retaining the voltage video signal supplied to the control terminal of the output transistor.

5. A device as defined in Claim 3, wherein

the drive element in the pixel circuit is a transistor, and the drive element and the output transistor of the voltage-to-current conversion circuit are of opposite conduction types.

6. A device as defined in Claim 1, wherein the voltage-to-current conversion circuit comprises:

a capacitor for retaining a voltage in accordance with the voltage video signal; and

an output transistor for outputting a current in accordance with the voltage retained in the capacitor.

7. A device as defined in Claim 6, wherein the voltage-to-current conversion circuit comprises:

first and second capacitors each for retaining a voltage in accordance with the voltage video signal;

first and second output transistors for outputting a current in accordance with the voltage retained in the first and second capacitors, respectively;

an input switching circuit for controlling switching of input of the voltage video signal into the first and second capacitors; and

an output switching circuit for controlling switching of output of the current to the data line from the first and second output transistors.

8. A device as defined in Claim 7, wherein

each of the first and second output transistors receives at its control terminal a charge voltage of the corresponding one of first or second capacitors, has one controlled terminal connected to a power source; and one other controlled terminal connected to the data line.

9. A device as defined in Claim 8, wherein

while the voltage video signal is supplied by the input switching circuit to the first capacitor, the output switching circuit supplies the current from the second output transistor to the data line, and

while the voltage video signal is supplied by the input switching circuit to the second capacitor, the output switching circuit supplies the current from the first output transistor to the data line.

10. A device as defined in Claim 9, wherein the first and second output transistors are connected to the power source via separate lines.